



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,821	10/16/2003	Jong-Kwon Kim	5000-1-456	8484
33942	7590	10/31/2005	EXAMINER	
CHA & REITER, LLC 210 ROUTE 4 EAST STE 103 PARAMUS, NJ 07652			KIANNI, KAVEH C	
			ART UNIT	PAPER NUMBER
			2883	

DATE MAILED: 10/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/686,821	KIM ET AL.	
	Examiner	Art Unit	
	Kianni C. Kaveh	2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 8-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5 is/are rejected.
- 7) ☒ Claim(s) 4, 6 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.



Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant's election with traverse of claims 1-7 in response/amendment submitted on 8/12/2005 is acknowledged. No grounds for the traversal is provided by the applicant.

This is not found persuasive and the requirement is still deemed proper and is therefore made FINAL.

Drawings

*The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, 'a higher-order port' and 'a lower-order port' and 'a highest-order port' and 'a lowest-order port' and **'a controller'** means that independently controls each respective reflector of the plurality of reflectors on to reflect, or off to allow the passage of light there through, according to a desired path must be shown or the features canceled from the claims. No new matter should be entered.*

Note that the specification has numerical designations for the **highest-order ports** and **lowest-order ports that are not shown in the drawings**.

A proposed drawing correction or corrected drawings are required in reply to the office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Allowable Subject Matter

Claims 4 and 6-7 are objected to as being dependent upon a rejected base claim, but would be allowable if, relevant drawings as stated above are corrected, and rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 4 allowable because the prior art of record, taken alone or in combination, fails to disclose or render obvious wherein each of the circulator as four or more ports in combination with the rest of the limitations of the base claim.

Claims 6-7 allowable because the prior art of record, taken alone or in combination, fails to disclose or render obvious wherein said device being adapted for operation by a controller, wherein said controller independently controls each respective reflector of the plurality of reflectors on to reflect, or off to allow the passage of light there through, according to a desired path in combination with the rest of the limitations of the base claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 2883

Claims 1-3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Konishi (US 20010048540).

Regarding claim 1, Konish teaches an optical switching device having a plurality of input ports (see inputs from 3), and a plurality of output ports (see outputs to 5), the optical switching device comprising:

a plurality of circulators 8-1-N each having a plurality of ports (shown in at least fig. 3, see circulators having items input ports, intermediary ports and output ports) while operating to output an optical signal, inputted to a higher-order port thereof (see input signal to higher order port through circulators), to a lower-order port thereof arranged adjacent to the higher-order port (see input signal to higher order port, to lower order port through circulators), each of the circulators being connected at a highest-order port thereof to an associated one of the input ports, at a lowest-order port thereof to an associated one of the output ports, and at each intermediate port thereof to a corresponding intermediate port of another one of the circulators (see each circulator having an input port--highest-order port—input from 3 at the lowest order port that is output to relevant output port to another circulators); and a plurality of reflectors 9_{1-N} each adapted to reflect an optical signal, inputted thereto, or to allow the optical signal to pass there through, each of the reflectors 9_{1-N} being connected between two intermediate ports of every two of the circulators 8-1-N connected to each other at the two intermediate ports (shown in at least fig. 3), wherein an optical signal input to an associated one of the input ports is output to an associated one of the output ports via

at least one of the circulators (shown in at least fig. 3, see circulators having output signals).

Regarding claims 2-3 and 5, Konish further teaches wherein each of the reflectors is a wavelength-independent bi-lateral reflector/grating (shown in at least fig. 3, items grating reflectors are wavelength-independent bi-lateral reflector--analogous to that of applicant's reflectors in the specification); wherein each of the circulators are aligned vertically (shown in at least fig. 3, items vertically aligned circulators).

Citation of Relevant Prior Art

Prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In accordance with MPEP 707.05 the following references are pertinent in rejection of this application since they provide substantially the same information disclosure as this patent does. These references are:

Islam 6943925 teaches at least claim 1

Fatehi et al. 6519064 teaches at least claim 1

Calvani et al. 5448660 teaches at least claim 1

Jones et al. 6310994

These references are cited herein to show the relevance of the apparatus/methods taught within these references as prior art.

Art Unit: 2883

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to K. Cyrus Kianni whose telephone number is (571) 272-2417.

The examiner can normally be reached on Monday through Friday from 8:30 a.m. to 6:00 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font, can be reached at (571) 272-2415.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9306 (for formal communications intended for entry)

or:

Hand delivered responses should be brought to Crystal Plaza 4, 2021 South Clark Place, Arlington, VA., Fourth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (703) 308-0956.



**KAYEH KIANNI
PRIMARY EXAMINER**

K. Cyrus Kianni
Primary Patent Examiner
Group Art Unit 2883

October 26, 2005
